## SEQUENCE LISTING

```
<110> Pastan, Ira
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      Lee, Byungkook
      Vasmatzis, George
      Wolfgang, Curt
      Brinkmann, Ulrich
      The Government of the United States of America
        as represented by the Secretary of the
        Department of Health and Human Services
<120> T-Cell Receptor Gamma Alternate Reading Frame Protein,
      (TARP) and Uses Thereof
<130> 015280-391200PC
<140> PCT/US00/19039
<141> 2000-07-12
<150> US 60/157,471
<151> 1999-10-01
<150> US 60/143,560
<151> 1999-07-13
<160> 33
<170> PatentIn Ver. 2.1
<210> 1
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<213> Artificial Sequence
<223> Description of Artificial Sequence: PCR primer
<400> 1
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aacttggaag ggrgaacraa gtcagtc
<210> 2
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<213> Artificial Sequence
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ttgggcagtt ggaacaacct gaaa
                                                                    24
<210> 5
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<212> DNA
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<400> 5
gataaacaac ttgatgcaga tgtttccc
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<210> 6
<211> 28
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gggaaacatc tgcatcaagt tgtttatc
                                                                    28
<210> 7
<211> 27
<212> DNA
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ctggagcttt gtttcagcaa ttgaagg
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<210> 9 <211> 25 <212> DNA <213> Artificial Sequence	•	
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<400> 9 ttatgatttc tctccattgc agcag	2	:5
<210> 10 <211> 25 <212> DNA <213> Artificial Sequence		
<220> <223> Description of Artificial	Sequence: PCR primer	
<400> 10 gaagttacta tgagcttagt ccctt	2	:5
<210> 11 <211> 24 <212> DNA <213> Artificial Sequence		
<220> <223> Description of Artificial	Sequence: PCR primer	
<400> 11 aagctttgtt ccgggaccaa atac	2	4
<210> 12 <211> 24 <212> DNA <213> Artificial Sequence		
<220> <223> Description of Artificial	Sequence: PCR primer	
<400> 12 tacctgtgac aacaagtgtt gttc	2	4

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<210> 13
<211> 1027
<212> DNA
<213> Homo sapiens
<220>
<221> CDS
<222> (74)..(247)
<223> Coding region for PS-TCR gamma 1 polypeptide
      (TARP)
<220>
<221> CDS
<222> (247)..(579)
<223> Coding region for PS-TCR gamma 2 polypeptide (deduced amino
      acid sequence not displayed along with DNA sequence, due to
      overlapping CDS's)
<400> 13
gggcaagagt tgggcaaaaa aatcaaggta tttggtcccg gaacaaagct tatcattaca 60
gataaacaac ttg atg cag atg ttt ccc cca agc cca cta ttt ttc ttc
                                                                   109
               Met Gln Met Phe Pro Pro Ser Pro Leu Phe Phe
                 1
ctt caa ttg ctg aaa caa agc tcc aga agg ctg gaa cat acc ttt gtc
                                                                   157
Leu Gln Leu Leu Lys Gln Ser Ser Arg Arg Leu Glu His Thr Phe Val
         15
ttc ttg aga aat ttt tcc ctg atg tta tta aga tac att ggg aag aaa
                                                                   205
Phe Leu Arg Asn Phe Ser Leu Met Leu Leu Arg Tyr Ile Gly Lys Lys
     30
                         35
                                                                   247
aga aga gca aca cga ttc tgg gat ccc agg agg gga aca cca
Arg Arg Ala Thr Arg Phe Trp Asp Pro Arg Arg Gly Thr Pro
45
                     50
                                         55
tgaagactaa cgacacatac atgaaattta gctggttaac ggtgccagaa aagtcactgg 307
acaaagaaca cagatgtatc gtcagacatg agaataataa aaacggagtt gatcaagaaa 367
ttatctttcc tccaataaag acggatgtca tcacaatgga tcccaaagac aattgttcaa 427
aagatgcaaa tgatacacta ctgctgcagc tcacaaacac ctctgcatat tacatgtacc 487
teeteetget eeteaagagt gtggtetatt ttgeeateat eacetgetgt etgettagaa 547
gaacggettt etgetgeaat ggagagaaat cataacagae ggtggeacaa ggaggeeate 607
ttttcctcat cggttattgt ccctagaagc gtcttctgag gatctagttg ggctttcttt 667
ctgggtttgg gccatttcag ttctcatgtg tgtactattc tatcattatt gtataacggt 727
tttcaaacca gtgggcacac agagaacctc actctgtaat aacaatgagg aatagccacg 787
gcgateteca geaceaatet etecatgttt tecacagete etecagecaa eccaaatage 847
gcctgctata gtgtagacat cctgcggctt ctagccttgt ccctctctta gtgttcttta 907
atcagataac tgcctggaag cctttcattt tacacgccct gaagcagtct tctttgctag 967
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## ttgaattatg tggtgtgttt ttccgtaata agcaaaataa atttaaaaaa atgaaaagtt 1027

<210> 14

<211> 58

<212> PRT

<213> Homo sapiens

<400> 14

Met Gln Met Phe Pro Pro Ser Pro Leu Phe Phe Phe Leu Gln Leu Leu 1 5 10 15

Lys Gln Ser Ser Arg Arg Leu Glu His Thr Phe Val Phe Leu Arg Asn 20 25 30

Phe Ser Leu Met Leu Arg Tyr Ile Gly Lys Lys Arg Arg Ala Thr 35 40 45

Arg Phe Trp Asp Pro Arg Arg Gly Thr Pro 50 55

<210> 15

<211> 111

<212> PRT

<213> Homo sapiens

<400> 15

Met Lys Thr Asn Asp Thr Tyr Met Lys Phe Ser Trp Leu Thr Val Pro  $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$ 

Glu Lys Ser Leu Asp Lys Glu His Arg Cys Ile Val Arg His Glu Asn 20 25 30

Asn Lys Asn Gly Val Asp Gln Glu Ile Ile Phe Pro Pro Ile Lys Thr 35 40 45

Asp Val Ile Thr Met Asp Pro Lys Asp Asn Cys Ser Lys Asp Ala Asn 50 55 60

Asp Thr Leu Leu Gln Leu Thr Asn Thr Ser Ala Tyr Tyr Met Tyr 65 70 75 80

Leu Leu Leu Leu Lys Ser Val Val Tyr Phe Ala Ile Ile Thr Cys 85 90 95

Cys Leu Leu Arg Arg Thr Ala Phe Cys Cys Asn Gly Glu Lys Ser 100 105 110

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<210> 16
<211> 16
<212> PRT
<213> Homo sapiens
<220>
<223> Partial amino acid sequence of TARP (residues
<400> 16
Gly Lys Lys Arg Arg Ala Thr Arg Phe Trp Asp Pro Arg Arg Gly Thr
<210> 17
<211> 16
<212> PRT
<213> Dictyostelium discoideum
<223> Partial amino acid sequence of Tupl (dTup,
      residues 521-536)
<400> 17
Gly Ser Lys Asp Arg Ser Val Gln Phe Trp Asp Pro Arg Asn Gly Thr
                                      10
<210> 18
<211> 16
<212> PRT
<213> Saccharomyces cerevisiae
<223> Partial amino acid sequence of Tup1 (yTup1,
      residues 626-660)
<400> 18
Gly Ser Lys Asp Arg Gly Val Leu Phe Trp Asp Lys Lys Ser Gly Asn
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<210> 19
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<212> DNA
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<223> Description of Artificial Sequence: PCR primer
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41

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<210> 20
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<223> Description of Artificial Sequence: PCR primer
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<210> 21
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<400> 21
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gataaacaac ttgatgcaga tatttccccc aagccc
<210> 22
<211> 36
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: PCR primer
<400> 22
gggcttgggg gaaatatctg catcaagttg tttatc
                                                                    36
<210> 23
<211> 36
<212> DNA
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gataaacaac ttgatacaga tatttccccc aagccc
                                                                    36
<210> 24
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<212> DNA
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gggcttgggg gaaatatctg tatcaagttg tttatc
                                                                    36
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<213> Artificial Sequence
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                                                                    38
<210> 26
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<212> DNA
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gtatgtgtcg ttagtcttta tggtgttccc ctcctggg
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<212> DNA
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gataaacaac ttgatgcaga tgttt
                                                                  25
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<212> DNA
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ttatgatttc tctccattgc agcag
<210> 29
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<400> 29
aagctttgtt ccgggaccaa atac
                                                                    24
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                                                                    32
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<212> PRT
<213> Homo sapiens
<223> Protein kinase phosphorylation site
<400> 32
Arg Arg Ala Thr
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<223> Protein kinase phosphorylation site
<400> 33
Arg Arg Gly Thr
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